

diagnostic circuitry to a process control circuitry." The Office Action finally asserts that,

"It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the teaching of Embree in the invention of Burns by substituting the direct coupling by an indirect coupling as taught by Embree in order to provide an efficient and accurate alternative for diagnosing a field bus process communication loop."

Respectfully, Embree does not teach indirect coupling for diagnostics. Embree simply provides an over-temperature system for an integrated circuit. See title of Embree. The circuit of Embree determines an actual operating temperature of a heat dissipating device within an integrated circuit with a relatively high degree of accuracy. The circuit allegedly reduces the effects of thermal delay associated with conventional temperature protection schemes, and apparently accomplishes this improved thermal protection at less cost than conventional high performance protection schemes. See column 2, lines 47-53. Aside from using the temperature of the circuit itself to shut the circuit down when the temperature becomes too high, the temperature circuit of Embree is never used to correlate or provide diagnostics on any communication associated with the integrated circuit. Further still, Embree does not teach or suggest providing diagnostics on a fieldbus process communication loop. Accordingly, even if one skilled in the art were to combine the teachings of Embree with that of Burns et al., the resulting hypothetical combination would merely provide a device having process diagnostics with over-temperature protection. Accordingly, applicants respectfully submit that independent claim 28 is allowable over Burns et al. and Embree, taken alone or in combination. Further, Applicants respectfully submit that dependent claims 29-33 are allowable as well by virtue of their dependency therefrom, either directly or indirectly.

In conclusion, Applicants respectfully submit that the entire application is now in condition for allowance. Reconsideration and favorable action are respectfully requested.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

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